In the claims:

Claim 1 (previously presented) A cathodic finger structure for diaphragm electrolytic cell, comprising a hollow body defining an internal volume in fluid communication with a perimetrical chamber and delimited by a conductive surface provided with holes coated with chemically inert porous diaphragm, said hollow body housing a reinforcing and electric current distributing internal element constituted by at least one sheet provided with projections, wherein said projections have a shape equivalent to spherical caps or elliptic caps or caps with prismatic sections.

Claim 2 (previously presented) The finger structure of claim 1, wherein the conductive surface provided with holes is an interwoven wire mesh or a perforated sheet.

Claim 3 (previously presented) The finger structure of claim 1 wherein said at least one sheet is a single sheet provided with projections on both its major surfaces.

Claim 4 (previously presented) The finger structure according to claim 1 wherein said sheet provided with projections is secured to said conductive surface by means of an electrically conductive connection.

Claim 5 (previously presented) The finger structure of claim 4, wherein said conductive connection is located on the apex of at least part of said projections.

Claim 6 (previously presented) The finger structure of claim 4 wherein said conductive connection establishes a plurality of generally equivalent ohmic paths for the uniform distribution of electric current.

Claim 7 (previously presented) The finger structure of claim 1 wherein said projections are arranged according to a square mesh pattern.

Claim 8 (previously presented) The finger structure of claim 1 wherein said projections are arranged according to a quincuncial pattern.

Claim 9 (previously presented) The finger structure of claim 1 wherein each vertical section of said at least one sheet comprises part of at least one of said projections.

Claim 10 (previously presented) The finger structure of claim 1 wherein the distance between the centers of two adjacent caps is between 50 and 65 millimeters and the radii of extrados and intrados of said caps are between 17 and 22 millimeters and between 12 and 16 millimeters respectively.

Claim 11 (previously presented) The finger structure of claim 1 wherein the thickness of said sheet is comprised between 5 and 7 millimeters.

Claim 12 (previously presented) The finger structure of claim 1 wherein said internal volume defined by said hollow body is subdivided by said at least one sheet into two portions in fluid communication with said perimetrical chamber, and said portions are only partially occupied by said projections and are available for the natural internal recirculation of electrolytes.

Claim 13 (previously presented) The finger structure of claim 1 wherein said at least one sheet provided with projections is further provided with openings in the residual flat areas.

Claim 14 (previously presented) The finger structure of claim 1 wherein said projections are obtained by plastic deformation of said at least one sheet.

Claim 15 (previously presented) The finger of claim 1 wherein said projections are independent pieces secured onto said at least one sheet.

Claim 16 (previously presented) The finger according to claim 15, wherein said projections are secured onto said at least one sheet by welding or brazing.

Claim 17 (previously presented) An electrolysis cell comprising an anodic compartment and a cathodic compartment separated by an inert porous diaphragm, wherein said cathodic compartment consists of a perimetrical chamber provided with at least one nozzle in the bottom for discharging electrolytes and with at least one nozzle in

the top for gas outlet, and of a plurality of cathodic fingers according to claim 1 electrically connected to said perimetrical chamber.

Claim 18 (previously presented) A process of chlor-alkali electrolysis, comprising feeding a sodium chloride solution to the anodic compartment of the cell of claim 17, applying electric current and discharging a solution of caustic soda and depleted sodium chloride formed inside said internal volume of said plurality of cathodic fingers through said nozzle for discharging electrolytes and a hydrogen flow through said nozzle for gas outlet.

Claim 19 (previously presented) The process of claim 18 wherein said hydrogen has free ascensional motion inside the internal volume of said plurality of cathodic fingers and free longitudinal motion towards said perimetrical chamber, and in that said solution of caustic soda and depleted sodium chloride has free recirculation in the internal volume of said plurality of cathodic fingers.

Claim 20 (currently amended) The process of claim 19, ~~characterised in that~~ wherein said hydrogen has free ascensional motion inside the internal volume of said plurality of cathodic fingers and free longitudinal motion towards said perimetrical chamber, and in that said solution of caustic soda and depleted sodium chloride has free recirculation in the internal volume of said plurality of cathodic fingers

Cancel **Claim 21**.